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Quality Control and Better Excellence for Performance of Energy Efficient Strategies in Contemporary Architecture

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Abstract

It is very important to monitor quality in building industry as well as find a way to synchronies this quality to the price of the building. The main issue of paper is to find a quality assessment method for building industry which influence the price of the buildings, and encourage better quality and promote more qualified building constructors. The paper suggests contingent valuation method (CVM) as quality monitoring system for contemporary architecture of Iran. The paper shows that the use values involves commercial values, resources values, architectural variety values, environmental values, cultural memories continuity, aesthetic values, spiritual values and originality, social values and historical values. Regarding to this hypothesis, the paper analyze characteristics of CVM and operate it in contemporary architecture of Iran as case study. As FGD results emphasize, CVM was successful and is reliable as a quality monitoring system, however FGD results are more practical than CVM results.

Keywords: quality control, energy efficient strategies, contemporary architecture, Iran.

Introduction

It is very important to monitor valuable things to protect their values and serve gained benefits. Building industry is one of those who are in need of a quality monitoring system even more than the other public sectors. In this perspective, (Albert, 1993; Ashton, 1972) contemporary architectural buildings are legacy of future. As declared in fundamental statement of docomomo: Docomomo UK campaigns to raise awareness of the ideas and heritage of modern movement buildings, landscape and urban design, and we work to conserve significant works from this period. (Bliss, 1934; Bliss, 1935) We organize regular events that examine the history of the period and conservation issues related to protecting modern buildings. This emphasize on role of contemporary architecture of developing countries such as Iran in future high-tech architecture because of their richness in cultural heritage and spiritual findings.

Figure 1: Tabriz Conventional Centre, Iran.

In famous referred documents in many philosophies of logic statements are categorized into different logical qualities based on how they go about saying what they say. In other hand, in physics and engineering the quality factor or Q factor is a dimensionless parameter that describes how under-damped an oscillator or resonator is or equivalently, characterizes a resonator's bandwidth relative to its center frequency. Quality Control and Monitoring System (QCMS) results in general emphasize on basic findings such as: 1. Do not confuse compliance with quality, 2. Coffee morning reviews, 3. Focus on the good and the bad calls, 4. Monitor across multiple channels, 5. Augment quality monitoring with automated surveys, 6. Involve agents in the auditing process, 7. Be objective, 8. Ensure that coaching is the outcome of assessing, 9. Abandon the 1-2% random selection process, 10. Use quality monitoring in other departments, 11. Cross-site calibration, 12. Automate your QA systems, 13. Improve calibrations, 14. Consider on-call monitoring and 15. Ensure the system is fair. Thus it can be concluded that “Monitoring isn’t all about spotting problems and dealing with them. It’s also about identifying and amplifying positive messages”.

Figure 2: TMU (Tarbiat Modares University), Tehran. Iran.

State of Issue

Building industry has a lot to do with quality especially because of its role in people's everyday life. It is very important issue to monitor quality in building industry as well as find a way to synchronies this quality to the price of the building. Operation of quality monitoring system for contemporary architecture is a crucial step towards sustainable excellence: leading a successful transformation” especially when refer to contemporary architecture of developing countries such as Iran. The main issue of this paper is how this kind of quality monitoring system for contemporary architecture can be performed in developing countries? The main issue of paper is to find a quality assessment method for building industry which influence the price of the buildings, and encourage better quality and promote more qualified building constructors.

Figure 3: Ajoodanieh Chess Park, Tehran. Iran.

Hypothesis

The paper suggests contingent valuation method (CVM) as quality monitoring system for contemporary architecture of Iran. Literature review of the paper shows that the use values involves commercial values, resources values, architectural variety values, environmental values, cultural memories continuity, aesthetic values, spiritual values and originality, social values and historical values. It is very important to explain that contemporary architecture of developing countries such as Iran because of their richness in cultural heritage and spiritual findings may be more and more in circumstances which focus on content rather than form and beauty rather than entertainment.

Figure 4: Modernism compiled by Iranian Taste of fantasy, Tehran. Iran.

Figure 5: Mobidic Centre, Tehran. Iran.

Methodology and Results

Regarding to this hypothesis, the paper analyze characteristics of contingent valuation method (CVM) and operate it in contemporary architecture of Iran as case study. Thus, the aim of this paper is to estimate the social benefits of contemporary architecture of Iran. In the CVM, a hypothetical market is introduced and all the specifications of certain merchandise are stated and then by a questionnaire people are asked for their willingness to pay for that merchandise. (Bliss, 1938; Collett, 1991), the price suggested by the people is considered as the utility or benefit of that merchandise. In this research contemporary architecture of Iran social benefit is investigated by CVM. Reviews application and Microsoft Excel is used for data analysis.

100 outstanding samples of contemporary architecture of Iran selected randomly within recent 10 years – 10 buildings for each year (Fig. 1-7). CVM self-made questionnaire for case studies handed out to 40 scholars in related areas to building industry. To evaluate efficiency of CVM method (Finney, 1947; Finney, 1971), a focus group discussion (FGD) has been set – involving 10 experts - and prosperity of contemporary architecture of Iran has been given to them for analysis. (Finney,1947; McCullagh and John, 1989; Steinbrecher, and Shaw,2008), A FGD is a

form of group interviewing in which a small group is led by a moderator (interviewer) in a loosely structured discussion of various topics of interest. Some statistical techniques such as logit and probit regression models adopted to examine operation of CVM model for monitoring buildings quality in contemporary architecture of Iran. It is very important to explain that (Thode,2002; Wichura,1988), what logit normal distribution is. “In probability theory, a logit-normal distribution is a probability distribution of a random variable whose logit has a normal distribution. If Y is a random variable with a normal distribution, and P is the logistic function, then X = P(Y) has a logit-normal distribution; likewise, if X is logit-normally distributed, then Y = logit (X) = log (X/(1-X)) is normally distributed. It is also known as the logistic normal distribution, which often refers to a multinomial logit version.” “In statistics, a probit model is a type of regression where the dependent variable can only take two values, for example married or not married. The name is from probability + unit. The purpose of the model is to estimate the probability that an observation with particular characteristics will fall into a specific one of the categories; moreover, if estimated probabilities greater than 1/2 are treated as classifying an observation into a predicted category, the probit model is a type of binary classification model.” Probit model as well as logit normal distribution is adopted to do the needed calculations.

Figure 6: De style modern style of architecture, Motahari St., Tehran. Iran.

Figure 7: Qods residential complexes, Tehran. Iran.

Conclusion

As FGD results emphasize, CVM was successful and is reliable as a quality monitoring system, however FGD results are more practical than CVM results. The results of the paper show that operation of quality monitoring system for contemporary architecture of Iran may be successful through CVM techniques which verified by FGD. Thus it can be concluded that quality of contemporary architecture of developing countries such as Iran can be guaranteed by means of CVM technique.

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